Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	18 oct 2023
Team ID	B59ACB2EE24AC56B74C4C89695327FAA
Project Name	Student performance analysis
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Collection:	The system should be able to collect relevant data about students, such as academic records, grades, attendance, and other performance-related information. It should provide mechanisms for data input, integration with existing educational systems, and data validation.
FR-2	Performance Metrics	The system should calculate and provide various performance metrics to assess student performance. These metrics can include average grades, GPA (Grade Point Average), class rank, attendance rate, test scores, or any other indicators relevant to the analysis
FR-3	Predictive Analysis	The system should be capable of performing predictive analysis to forecast future student performance based on historical data. It may employ statistical models or machine learning algorithms to predict outcomes, such as future grades or likelihood of success.
FR-4	Reporting and Visualization:	The system should generate comprehensive reports and visualizations to present the analysis results in a clear and understandable manner. It should provide charts, graphs, dashboards, or summary reports to aid educators, administrators, or stakeholders in interpreting and utilizing the analysis findings.
FR-5	Alerts and Notifications	The system should have the capability to generate alerts or notifications based on predefined criteria or thresholds. For example, it can alert teachers or

		administrators about students who are at risk of academic failure or require additional support.
FR-6	Collaboration and Communication	The system should facilitate collaboration and communication among teachers, administrators, and parents regarding student performance. It can include features such as messaging, discussion forums, or notifications to foster effective communication and collaboration.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system should be user-friendly and intuitive, allowing users (e.g., teachers, administrators) to easily navigate, interact with, and interpret the analysis results. The user interface should be clear, visually appealing, and provide meaningful visualizations or reports
NFR-2	**Security**	The system should ensure the security and privacy of student data. It should implement appropriate measures to protect data from unauthorized access, ensure data confidentiality, and comply with relevant data protection regulations.
NFR-3	**Reliability**	The system should be reliable and available for use whenever needed. It should have mechanisms in place to handle errors or failures gracefully, recover from system disruptions, and prevent data loss or corruption.
NFR-4	**Performance**	The system should be able to process and analyze large volumes of student data efficiently and provide timely results. It should deliver fast response times and handle concurrent user requests without significant delays
NFR-5	**Availability**	The system should be highly available and accessible to users for an agreed-upon percentage of time. For example, it should aim for a 99.9% uptime, allowing for scheduled maintenance and minimizing unplanned outages.
NFR-6	**Scalability**	The system should be designed to handle an

		increasing number of students and data over time. It should be able to scale both vertically (by adding more resources to a single server) and horizontally (by distributing the load across multiple servers) to accommodate growing data volumes.